

What is claimed is:

1. A disk drive comprising:  
2 a drive housing;  
a storage disk coupled to the drive housing; and  
4 a head arm assembly coupled to the drive housing, the head arm  
assembly including an adjuster and a slider coupled to the adjuster;  
6 wherein the adjuster changes the gram load that is applied to the slider  
as the temperature near the adjuster changes.
2. The disk drive of claim 1 wherein the adjuster increases the gram  
2 load that is applied to the slider as the temperature near the adjuster  
decreases.
3. The disk drive of claim 2 wherein the gram load increases at least  
2 approximately four percent for a twenty °C decrease in temperature.
4. The disk drive of claim 2 wherein the gram load increases at least  
2 approximately seven percent for a twenty °C decrease in temperature.
5. The disk drive of claim 1 wherein the adjuster decreases the gram  
2 load that is applied to the slider as the temperature near the adjuster increases.
6. The disk drive of claim 1 wherein adjuster includes a first layer  
2 and a second layer that is secured to the first layer, wherein the first layer has a  
coefficient of thermal expansion that is different from a coefficient of thermal  
4 expansion of the second layer.
7. The disk drive of claim 6 wherein the coefficient of thermal  
2 expansion of the first layer is greater than the coefficient of thermal expansion  
of the second layer.

2 8. The disk drive of claim 6 wherein the coefficient of thermal expansion of the first layer is at least approximately ten percent greater than the coefficient of thermal expansion of the second layer.

2 9. The disk drive of claim 6 wherein the coefficient of thermal expansion of the first layer is at least approximately twenty-five percent greater than the coefficient of thermal expansion of the second layer.

2 10. The disk drive of claim 6 wherein the coefficient of thermal expansion of the first layer is at least approximately fifty percent greater than the coefficient of thermal expansion of the second layer.

11. The disk drive of claim 6 wherein each layer is made of a metal.

2 12. The disk drive of claim 6 wherein the first layer is made of steel and the second layer is made of titanium.

2 13. The disk drive of claim 1 wherein the adjuster includes a first layer and a second layer that is secured to the first layer, wherein the first layer has a modulus of elasticity that is different from a modulus of elasticity of the second layer.

2 14. The disk drive of claim 1 wherein the head arm assembly includes a load beam and the adjuster is a part of the load beam.

2 15. The disk drive of claim 1 wherein the head arm assembly includes an arm beam and the adjuster is a part of the arm beam.

2 16. The disk drive of claim 1 wherein the adjuster includes a first layer and a second layer, wherein the first layer has a different material composition than the second layer.

17. A disk drive comprising:

a drive housing;

a storage disk coupled to the drive housing; and

a head arm assembly coupled to the drive housing, the head arm assembly including an adjuster and a slider coupled to the adjuster, the adjuster including a first layer and a second layer that is secured to the first layer, the first layer having a coefficient of thermal expansion that is different from a coefficient of thermal expansion of the second layer.

18. The disk drive of claim 17 wherein the adjuster increases the gram load that is applied to the slider as the temperature near the adjuster decreases.

19. The disk drive of claim 18 wherein the gram load increases at least approximately four percent for a twenty °C decrease in temperature.

20. The disk drive of claim 18 wherein the gram load increases at least approximately seven percent for a twenty °C decrease in temperature.

21. The disk drive of claim 18 wherein the adjuster decreases the gram load that is applied to the slider as the temperature near the adjuster increases.

22. The disk drive of claim 17 wherein the coefficient of thermal expansion of the first layer is greater than the coefficient of thermal expansion of the second layer.

23. The disk drive of claim 17 wherein the coefficient of thermal expansion of the first layer is at least approximately ten percent greater than the coefficient of thermal expansion of the second layer.

2 24. The disk drive of claim 17 wherein the coefficient of thermal expansion of the first layer is at least approximately twenty-five percent greater than the coefficient of thermal expansion of the second layer.

2 25. The disk drive of claim 17 wherein the coefficient of thermal expansion of the first layer is at least approximately fifty percent greater than the coefficient of thermal expansion of the second layer.

26. The disk drive of claim 17 wherein each layer is made of a metal.

2 27. The disk drive of claim 17 wherein the first layer is made of steel and the second layer is made of titanium.

2 28. The disk drive of claim 17 wherein the head arm assembly includes a load beam and the adjuster is a part of the load beam.

2 29. The disk drive of claim 17 wherein the head arm assembly includes an arm beam and the adjuster is a part of the arm beam.

2 30. A disk drive comprising:  
a drive housing;  
a storage disk coupled to the drive housing; and  
4 a head arm assembly coupled to the drive housing, the head arm assembly including an arm beam, a load beam coupled to the arm beam,  
6 and a slider coupled to the load beam, wherein at least one of the beams includes an adjuster that increases the gram load that is applied to the  
8 slider as the temperature near the adjuster decreases, the adjuster including a first layer and a second layer that is secured to the first layer,  
10 the first layer has a coefficient of thermal expansion that is different from a coefficient of thermal expansion of the second layer.

2 31. The disk drive of claim 30 wherein the gram load increases at least approximately four percent for a twenty °C decrease in temperature.

2 32. The disk drive of claim 30 wherein the gram load increases at least approximately seven percent for a twenty °C decrease in temperature.

2 33. The disk drive of claim 30 wherein the adjuster decreases the gram load that is applied to the slider as the temperature near the adjuster increases.

2 34. The disk drive of claim 30 wherein the coefficient of thermal expansion of the first layer is greater than the coefficient of thermal expansion of the second layer.

2 35. The disk drive of claim 34 wherein the coefficient of thermal expansion of the first layer is at least approximately ten percent greater than the coefficient of thermal expansion of the second layer.

2 36. The disk drive of claim 34 wherein the coefficient of thermal expansion of the first layer is at least approximately twenty-five percent greater than the coefficient of thermal expansion of the second layer.

2 37. The disk drive of claim 34 wherein the coefficient of thermal expansion of the first layer is at least approximately fifty percent greater than the coefficient of thermal expansion of the second layer.

2 38. The disk drive of claim 30 wherein the first layer is made of steel and the second layer is made of titanium.

2 39. A method for maintaining a slider within a desired flying height as temperature changes, the method comprising the steps of:

adjusting the gram load applied to the slider as temperature changes to maintain the slider within a desired flying height.

40. The method of claim 39 wherein the step of adjusting includes the step of increasing the gram load that is applied to the slider as the temperature decreases.

41. The method of claim 40 wherein the gram load increases at least approximately four percent for a twenty °C decrease in temperature.

42. The method of claim 40 wherein the gram load increases at least approximately seven percent for a twenty °C decrease in temperature.

43. The method of claim 39 wherein the step of adjusting includes the step of decreasing the gram load that is applied to the slider as the temperature increases.

44. The method of claim 39 wherein the step of adjusting the gram load includes the step of coupling an adjuster to the slider.

45. The method of claim 44 wherein the step of coupling includes the steps of providing a first layer and a second layer that is secured to the first layer, wherein the first layer has a coefficient of thermal expansion that is different from a coefficient of thermal expansion of the second layer.

46. The method of claim 45 wherein the coefficient of thermal expansion of the first layer is greater than the coefficient of thermal expansion of the second layer.

47. The method of claim 45 wherein the coefficient of thermal expansion of the first layer is at least approximately ten percent greater than the coefficient of thermal expansion of the second layer.

2 48. The method of claim 45 wherein the coefficient of thermal expansion of the first layer is at least approximately twenty-five percent greater than the coefficient of thermal expansion of the second layer.

2 49. The method of claim 45 wherein the coefficient of thermal expansion of the first layer is at least approximately fifty percent greater than the coefficient of thermal expansion of the second layer.

50. The method of claim 45 wherein each layer is made of a metal.

2 51. The method of claim 45 wherein the first layer is made of steel and the second layer is made of titanium.